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Handbook of Procedures

Construction Grants Program for Municipal Wastewater Treatment Works

TRANSMITTAL MEMORANDUM

No. 77-1

DECEMBER 1976

Municipal Construction Division
Water Program Operations
Office of Water and Hazardous Materials

U.S. Environmental Protection Agency
Washington, D.C. 20460

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OFFICE OF WATER AND HAZARDOUS MATERIALS

CONSTRUCTION GRANTS
TRANSMITTAL MEMORANDUM:
TM No. 77-1

SUBJECT: Revisions to Construction Grants Handbook of Procedures

FROM: John T. Rhett, Deputy Assistant Administrator for Water Program Operations (WH-556)

TO: All Regional Administrators I - X
ATTN: Water Division Directors

PURPOSE:

The purpose of this memorandum is to transmit revised pages for the Construction Grants Handbook of Procedures.

DISCUSSION:

The attached changes result from the issuance of Program Requirements Memoranda and other policy statements since the date of the last TM (TM 76-1, 8/19/76).

HANDBOOK REVISIONS:

1. Page IV-40: The section on evaluation of the Facility Plan was revised to reflect the importance of emphasizing in those plans, the actual cost of the proposed facility - both long and short range - to the average user as provided for in PRM 76-3.

2. Page V-8: A new paragraph (f) was added to the section on "Assurances and Program Requirements" to reflect the new policy regarding permits for dredge and fill materials in accordance with PRM 76-4.

3. Page VI-9: The section on the Flood Disaster Protection Act of 1973 was revised to clarify the definition of "structures" as delineated in PRM 76-5.

4. Page IV-25: Paragraph (b) under Section 4.2 ("Existing Wastewater Flows and Treatment Systems") was altered to reflect the need to assure that the construction of interceptors and collectors will not result in overload conditions at the existing treatment facility. This policy was established in a general memorandum to all Regional Offices dated October 26, 1976.

5. Page V-17: The section on "Bonding" requirements was changed to emphasize and reaffirm the Agency policy precluding bid guarantees greater than 5 percent or in a specific form. This policy derives from 40 CFR 35.936-3 which stipulates a 5 percent bid guarantee and from Attachment "B" to Federal Management Circular 74-7 which requires that the 5 percent bid guarantee "consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument...". Thus, while the amount is fixed, the form that the guarantee takes is optional so long as the instrument or surety complies with Federal Regulations and safeguards the Municipality's interest.

6. Pages II-6, 7 and 8: On II-6, in item 2(b) the word "existing" has been added after "the"; II-7, an item "f" was added in the section relating to review of the priority lists; II-8, a reference was added for PRM 77-1. These changes were needed as a result of the issuance to PRM 77-1 which requires in essence that treatment works designed to reduce pollution from the backlog of existing municipal wastewater discharges be given priority over projects designed to serve new parks, institutions, etc.

7. Page VII-17: A statement relating to the grant eligibility of certain start-up costs has been added in accordance with PRM 77-2.

8. Page VI-38 has been revised to reference PRM 77-3, relating to the Plan of Operation and its applicability to the Construction Grants program.

9. Page VII-9: The paragraph relating to site acquisition was revised to reflect the eligibility of lease/easement costs under certain limited conditions. These conditions are set forth in PRM 77-5, 12/15/76.

10. Page IV-42: A new paragraph "n" has been added to the section on "Review Procedures" to reflect the issuance of PRM 77-4 which outlines methods of allocating costs in multiple purpose projects.

11. Appendix D: The list of PRM's has been amended to add those which have been issued since the publication of TM 76-1.

BIBLIOGRAPHIC DATA SHEET	1. Report No. MCD-03.2	2.	3. Recipient's Accession No.
4. Title and Subtitle Handbook of Porcedures, Construction Grant Programs for Municipal Wastewater Treatment Works			5. Report Date December 1976 6.
7. Author(s)			8. Performing Organization Rept. No.
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12. Sponsoring Organization Name and Address Same as Box 9			13. Type of Report & Period Covered 14. 78X/42

15. Supplementary Notes

16. Abstracts
This transmittal memorandum offers revision to "Construction Grants Handbook of Procedures" MCD - 03. This is the second updating in a series to be offered.

17. Key Words and Document Analysis. 17a. Descriptors
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Municipal wastewater treatment

17b. Identifiers/Open-Ended Terms

17c. COSATI Field Group

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FILING INSTRUCTIONS:

1. File this TM in Appendix D of the Grants Handbook of Procedures.

2. Substitute the attached pages ("bottom" dated 12/76, TM 77-1) for the appropriate pages presently in the Handbook.

3. Item 11, above, should be used to replace the appropriate index page in Appendix D of the Handbook. The page to be replaced is "bottom" dated 8/76, TM 76-1. Also attached is a replacement for page ix/x of the Table of Contents.

Attachments

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7. Institutional Arrangements..... VI-10

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6. Municipal Permits

PL 92-500 established the National Pollution Discharge Elimination System (NPDES) as the enforcement mechanism for achieving water quality standards. The discharge permit issued under the system is applicable to all municipal and industrial discharges. Where 303(e), 208 or 201 plans have been established, the permits will require compliance with such plans. In the case of existing sewage treatment facilities which, because of present or anticipated future inadequate treatment, will not achieve the water quality standards, the NPDES permit may contain limitations, conditions or schedules which will prompt the municipality to apply for a construction grant. The State agency will designate the boundaries (if not previously designated) of the 201 facility planning area and the construction grant process will begin. An applicant for a construction grant must comply, at a minimum, with an applicable existing permit.

Re: 40 CFR Part 125

B. STATE STRATEGY AND PROGRAM

1. Program Submittal

As a part of the State Continuing Planning Process, each State is required to submit to EPA a program for the coming fiscal year. This annual program also satisfies the requirements of Section 106 of PL 92-500, which provides for grants to the State agencies to carry out the planning processes. The key element of the annual plan is the State strategy which must:

(a) identify water quality problems and their causes;

(b) list these problems by geographical location;

(c) describe the State's approach to solving the problems, including the extent to which non-point sources will be addressed;

(d) provide a listing of the priorities and scheduling of permits, construction grants, areawide plans and other program actions;

(e) describe the level of detail and the schedule for preparation of basin plans;

(f) describe how the State will satisfy the reporting requirements under Section 305(b) of PL 92-500.

The construction grants reviewer is primarily concerned with item (d) above, namely the listing of State priorities for construction grants projects.

Re: 40 CFR 130.40

2. State Priority System and List

As a part of its program strategy, the State must prepare a municipal discharge inventory which ranks all of the significant municipal discharges within the State. This inventory must be consistent with the stream segment priority rankings also prepared as a part of the overall State strategy. The State then develops a system of ranking projects for funding, which gives consideration to:

(a) the severity of pollution problems;

(b) the *existing* population affected;

(c) the need for preservation of high quality waters;

(d) national priorities;

(e) total funds available;

(f) treatment works sequence;

(g) any additional factors considered pertinent by the State.

The resulting project priority list is a State management tool and represents the projects which are anticipated to be funded with the State's allocation.

The priority list of projects which are to receive construction grant funds within the State must include, as a minimum, the name of each municipality, a State-assigned EPA project number, a description of the type and scope of the project, total estimated cost and estimated Federal assistance. Each project must be certified by the State as being entitled to priority for Federal assistance from available funds over other eligible projects in the State.

In reviewing the State priority list, it is necessary to insure that:

(a) the above information is included for each project;

(b) the grant funds involved equal or exceed the State allotments available;

(c) known problem areas in the State have been properly considered;

(d) cost estimates appear to be reasonable;

(e) previously approved Step 1 and Step 2 projects are properly reflected and realistically scheduled for funding;

(f) *highest priority is assigned to projects which reduce pollution from existing municipal wastewater discharges.*

While the project priority list must be developed in accordance with the criteria listed above, the criteria are not to be construed as removing all flexibility in the establishment of the list. For example, large city projects should be precluded from using all or almost all of a State's allocation. This may be accomplished by the State reserving funds for projects of smaller communities (as defined by the State and approved by the Regional Office), or by dividing the work into several segments or smaller projects. In the first case, the State must consider the severity of the pollution problem in ranking projects of both the larger communities category and the smaller communities group and in consolidating the projects of each group into the priority list. In the second case, both the State and the applicant must recognize that:

(a) all grants must be awarded at the 75% level;

(b) the project must be comprised of a discrete and meaningful part of the treatment system;

(c) the awarding of the grant does not bind EPA to fund the remaining parts of the treatment system;

(d) the acceptance of the grant commits the grantee to the completion of both an operable treatment works and the complete sewage treatment system of which the assisted project is a part.

The project priority list may also contain reserve funds as explained below under Funding.

The State's priority list is submitted annually as part of the State's program. The list is not approved by the Regional Administrator unless it has been the subject of a public hearing. During the year, certain amendments may have to be made to the list. These amendments do not require a public hearing if the Regional Administrator does not consider them significant.

Ref: 40 CFR 35.915, .930-4, .935-1
40 CFR 130.41
Program Requirements Memorandum, PRM 76-14, (PG-55) 6/10/74; PRM 76-24, (PG-48), 12/27/76; PRM 77-1, 12/28/76

3. Funding

The State allocation of construction grant funds will vary from year to year. The initial State allotments are available for 30 months. In developing the priority list funding requirements, the State must reserve a reasonable portion, but not less than five percent of its annual allocation, for grant increases. While every effort must be made by the grantee and State to insure accurate and up-to-date cost estimates for the projects, cost overruns do occur and grant increases may be made from these reserves. Where cost overruns exceed the reserves, the State may:

(a) use recovered PL 92-500 funds; or

(b) use funds from the succeeding year's allotment; or

(c) if the succeeding year's allotment has not been allocated, defer fundable projects on the lowest end of the priority list to free up funds; or

(d) negotiate with the applicant to consider dividing the work as explained above.

e. Other existing environmental conditions - this section is an environmental inventory and may include, to the extent appropriate, descriptions of air quality, noise levels, energy production and consumption, wetlands, flood plains, coastal zones, wild and scenic rivers and other environmentally sensitive areas, historic, architectural and archaeological sites, plant and animal communities which may be effected, especially those on the threatened or endangered species list, and related Federal or State projects in the area.

The reviewer is to take special note of the items underlined in e. above and included in the inventory since the impact of the proposed project on these items may require the grantee or EPA to follow special review procedures (see section 10). Also, the reviewer should note major industrial contributors to insure that they provide pretreatment, as necessary, in the proposed project.

Re: 40 CFR 6.512(a)(1)
GPPP pp. 5, 6
FBM Guide (EIS-02), 3/11/76

4.2 Existing Wastewater Flows and Treatment Systems

Purpose and Discussion:

The inventory of existing wastewater treatment facilities furnishes information as to the extent of the existing systems, their interrelationships, and the base line flow information by which future flows will be determined. The data may indicate conditions which limit the number of feasible alternatives and give an indication of the severity of the pollution problems. Later sections address the performance of existing systems and methods of achieving optimum performance.

Review Procedures:

The inventory should, to the extent appropriate:

a. show the location of all treatment plants, sludge management areas and facilities, pretreatment plants, pumping stations and collection systems;

b. describe the facilities identified in a., including design capacity, existing flows and characteristics of wastes, overloaded conditions, if any. *NOTE: In those cases where interceptor or collection projects are involved, attention must be given to existing plant capacity to insure that the project will not result in overload conditions.*

c. show the location of, and describe, major industrial discharges;

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d. include a discussion and analysis of average, peak, dry, and wet-weather flows (also discussed in I/I analysis);

e. show the locations of all bypasses and overflows;

f. describe the extent of any combined sewer system;

g. describe any flow reduction program

Re: SPFP p. 6

4.3 Infiltration and Inflow

Infiltration/Inflow Analysis

Purpose:

The infiltration/inflow analysis is conducted to identify the existence, or possible existence, of excessive infiltration/inflow within each sewer system emptying into the proposed treatment facilities when the State has inadequate information upon which to base a certification of such conditions.

Discussion:

As a part of the facility plan, a sewer system evaluation is begun,consisting of:

an infiltration/inflow analysis conducted in accordance with the "Guidance for Sewer System Evaluation".

The purpose of the sewer system evaluation is to identify infiltration and inflow which may be economically removed from the system. The results of the sewer system evaluation are used in sizing the proposed project.

Program experience gained during the initial years indicates the following procedures can be used to accelerate infiltration/inflow analysis:

a. Only the minimum information needed by the Regional Administrator upon which to base a decision need be submitted with the I/I analysis. Conclusions reached must be supported by flow data. Where need for a sewer system evaluation survey is indicated, preliminary cost estimates should be included. The analysis must be approved by the State.

Re: 40 CFR 35.920-1b
40 CFR Part 125
GPFP p. 13

6.4 Evaluation (Monetary, Environmental, Implementation)

Purpose:

An evaluation of the most feasible alternatives is performed in order to select the most cost-effective and environmentally sound project.

Discussion:

The preceding sections of this chapter provided a systematic guide for reducing the possible alternatives to a manageable number. The alternatives to be evaluated in this section are the most feasible and will be subjected to a more detailed evaluation under the broad categories of monetary, environmental and implementation considerations.

The results of the evaluation will be a display and ranking of the final alternatives in preparation for public review and the eventual selection of the most cost-effective and environmentally sound project. During this evaluation some of the alternatives may be eliminated from further consideration based upon adverse environmental impacts, high costs, legal complications or other reasons. The reasons for elimination must be stated. The data used in the evaluations must be supported in other sections of the facility plan. Each alternative should be evaluated in sufficient detail and in a similar format to facilitate its display and ranking.

Detailed assistance and instructions for preparing monetary evaluations is given in the Guidance and in Appendix A, 40 CFR Part 35. The environmental impact evaluation must consider both primary and secondary impacts. The secondary impacts (indirect or induced by the project) must be presented and carefully evaluated as they could form the basis for the preparation of an environmental impact statement (see Section 10). The review procedures below highlight the key factors to be considered in the evaluation.

Review Procedures:

Each alternative should be analyzed and evaluated with regard to its relationship or impact upon the subjects below:

a. monetary cost analysis based upon:

- present worth or equivalent annual cost over planning period;

- interest rate as published by U.S. Water Resources Council at the time of initiation of the facility plan;

- capital and operation and maintenance costs;
(NOTE: Monetary costs should be shown in total and in terms of their full impact on the average citizen (being served) and industry monthly and annually. Included (in itemized form) should be the capital cost to the grantee (local share), interest on borrowed capital, sinking fund costs, O&M costs, connection charges, etc.).

- existing facilities-considered as sunk costs;

- inflation-not considered unless justified;

- interest on capital equipment during construction-uniform unless longer than 3 years;

- service life - land 50 years
  structures 30-50 years
  process equipment 15-30 years
  auxiliary equipment 10-15 years;

- salvage value included;

Re: 40 CFR Part 35 Appendix A, *PRM 76-84 (PG-60), 8/11/76; PRM 76-8, 8/10/76*; GPFP pp. 18-24

b. environmental impacts (see Section 10)

- both primary and secondary;

- beneficial and adverse;

- irreversible and irretrievable commitments of resources;

- long-term and short-term;

- mitigating measures;

Re: 40 CFR Part 6; *PRM 76-86 (PG-60), 8/8/76*; GPFP pp. 11, 12

c. institutional arrangements

- identify responsible organization for each alternative;

- estimated costs to each jurisdiction;

Re: GPFP p. 12

d. significant industrial service

- costs of separate treatment;
- costs of pretreatment followed by municipal treatment;

Re: 40 CFR 35.928-15, Part 128
GPFP p. 13

e. flow and waste reduction measures;

Re: 40 CFR 35.917-1 (d)(2)
GPFP p. 13

f. sewer system arrangements

- pipe sizes and useful life;
- excess or reserve capacity;
- alternate routings;

Re: 40 CFR 35.917-1(d)(1)
GPFP p. 13

g. method of sludge disposal;

Re: 40 CFR 35.917(d)(6)
GPFP p. 13

h. location of facilities

- odors and aesthetics;
- cultural or environmentally sensitive resources (see Section 10);
- relationship to flood plains;

Re: 40 CFR Part 6
GPFP p. 14

i. revision of waste load allocations;

Re: GPFP p. 14

j. phased construction

- excess or reserve capacity;
- modular designs;

Re: CPFP p. 14

k. project segmenting (see Chapter II B.2. of Handbook);

l. flexibility

- future land requirements for treatment plant expansion or upgrading;
- easements and rights-of-way for sewers;

Re: CPFP p. 15

m. reliability

- treatment processes;
- equipment and personnel;

Re: CPFP p. 15

n. *multiple purpose projects*

- *prepare and review cost allocations*

Re: FW/ FY-4, 12/8/76

7. Plan Selection

7.1 Views of Public and Concerned Interests on Alternatives

Purpose:

Public participation is required to aid the grantee in selecting a plan which will be cost-effective and have the widest possible public acceptance.

Discussion:

Issues surrounding water quality problems and the large amounts of money needed to solve them often come under attack from varied interests. Although the primary responsibility for water pollution control and abatement rests in governmental agencies, public involvement in the decisions and implementation is necessary and desirable. The intent of public participation is to foster a spirit of openness and a sense of mutual trust between the public and governmental agencies and to give the

g. Part V, Assurances, is included with the application; if not the application must be returned to the applicant for inclusion of a signed copy of the Assurances.

Ref: 40 CFR 30.315
40 CFR 35.920-2, .920-3(b)(4)
Program Requirements Memorandum, PRM 78-1 (EU-1), 6/26/78
41 CFR Part 51, Department of Treasury

3. Contracts and Subagreements

Purpose:

Contracts or subagreements for personal or professional services are submitted by the applicant and reviewed by both the State and EPA to insure that the scope and nature of the proposed services are sufficient to result in approvable plans and specifications and that the fees and schedules are reasonable.

Discussion:

The personal and professional services covered by the subagreements at the time of Step 2 application submission are generally the consulting engineering services. The regulations state that the application shall include *proposed subagreements or an explanation of the intended method of awarding subagreements for performance of any substantial portion of the project work.*

Also, the regulations require that any such subagreements or lower tier subagreements include an "access" clause allowing the State or EPA access, at reasonable times and places, to the work or records. The "access" clause is applicable to subagreements or lower tier subagreements in excess of $10,000.

The detailed requirements of and procedures for procuring personal or professional services are contained in the regulations, 40 CFR 35.936, .937. Subagreements in which the fee is a percentage of construction costs are not acceptable, nor are cost multiplier contracts where profit is included in the multiplier.

Review Procedures:

Review the agreement(s) to determine that:

a. the applicant has complied with 40 CFR 35.936 and .937;

b. the scope of the work is sufficient to prepare approvable plans and specifications;

c. completion schedules are reasonable and in agreement with the facility plan.

Re: 40 CFR 35.920-3(b)(7), .935-7, .936, .937, .938, .939, .961 and Appendices C & D; 40 CFR 30.605

4. Assurances and Program Requirements

The regulations require that the applicant furnish evidence of meeting program requisites and assurances made in the Step 1 and Step 2 grant application as well as requirements prescribed by other Federal statutes. Evidence of compliance with the following is of particular importance:

a. user charges - the applicant must submit an approvable plan and schedule for the implementation of a user charge system in accordance with the guidelines in the regulations (40 CFR, Part 35, Appendix B);

b. industrial cost recovery - the applicant must agree to require all industrial users to pay that portion of the grant amount allocable to the treatment of wastes from their use of the system; also the applicant must furnish letters from the major (10% or more of waste flow or strength) industrial users indicating that they will pay their portion of the grant amount allocable to the treatment of wastes from their use of the system and their intended period of use.

c. service agreements - where the project involves more than one political jurisdiction, the applicant must submit completed or substantially completed service agreements. These agreements will include financial arrangements and will obligate each jurisdiction to enforce the requirements for user charges, industrial cost recovery, sewer system rehabilitation and sewer use ordinances.

d. Civil Rights Act of 1964 - the applicant must complete two forms: Assurance of Compliance, EPA Form 4700-1, and Compliance Report, EPA Form 4700-4;

e. Relocation and Land Acquisition Policies Act of 1970 - if the project will result in the acquisition of private property or the displacement of persons, the applicant must submit a statement that he will prepare a program for compliance with the provisions of the Act.

f. *Section 404/Section 10 Permits - When permits from the Corps of Engineers for the discharge of dredged or fill material are required for the facility, an issued 404/Section 10 permit or a determination by the Regional Administrator that the Corps is prepared to issue a permit.*

Re: 40 CFR 35.917-6, .920-3(b)(5)(6), .925-9, .925-11, .925-12, 40 CFR 30.405-2, .405-3; *Program Requirements Memorandum, PRM 76-4, 10/14/76*

(3) Davis-Bacon Act

The provisions of the Davis-Bacon Act must be included in contracts exceeding $2,000. These provisions require the payment of prevailing wages for the various trades as determined by the Secretary of Labor.

Prevailing area-wide rates are published weekly in the Federal Register. For individual projects not included in areas with area-wide wage rate determinations, the Regional Office will obtain a wage rate for inclusion in the specifications.

Modifications to area-wide wage rate determinations are to be included in the bidding documents provided they have been published 10 days prior to the bid opening date. Modifications to individual project determinations are to be included provided they are received in the Regional Office 10 days prior to bid opening.

The reviewer is to insure that the current wage rate determination is included in the bidding documents or that provisions for inclusion have been made.

Ref: 40 CFR 30.403, .415

(4) Flood Insurance

For projects requiring flood insurance (see Chapter VI E.4.a. of this Handbook) make certain that the contractor is required to obtain the necessary flood insurance during construction.

(5) Bonding

For contracts in excess of $100,000, the following minimum bonding and insurance requirements must be met:

- 5% bid bond; *Grantees may not require bid guarantees greater than 5% or that a specific form of bid guarantee be used.*

- 100% performance and payment bond;

- fire and extended coverage, workmen's compensation, public liability and property damage, and "all risk", as required by local or State law;

- flood insurance, as applicable, during construction.

For contracts less than $100,000, bonding and insurance requirements shall be in accordance with local or State practices.

b. Technical Review:

The technical review of the plans and specifications is carried out to insure that the proposed facilities, if constructed in accordance with the plans and specifications, will achieve the effluent limitations or water quality standards required by the NPDES permit. The review is also to insure that sound engineering design principles are employed, primarily regarding process considerations. Structural, electrical, and mechanical details of the design are not critically reviewed because they are the responsibility of the engineer whose seal appears on the drawings. However, obvious irregularities should be noted.

The technical review should evaluate the plans and specifications according to the criteria in "Program Checklist for Engineering Drawings, Specifications, and Engineering Reports" (see Appendix C) to the extent appropriate for the particular project and State requirements. The following are examples of items which should be reviewed.

(1) Safety Precautions

The requirements of the Occupation Safety and Health Act (OSHA) must be fulfilled;

(2) Mitigative Measures

Plans and specifications must be compared with mitigative measures required by the environmental assessment or impact statement. Examples might be soil erosion control, hours of operation, backfilling and seeding, structural design for buildings in a flood plain, etc.

(3) Bypassing

Construction is to be carried out so as to prevent bypassing of flows during construction, where possible.

(4) Project Sign

Contractor is required to provide a project sign in accordance with the drawing shown in Appendix B.

a. Flood Disaster Protection Act of 1973 - To determine if a community is required to participate in the flood insurance program, consult the Federal Register of June 25, 1975, pages 26740-26756, and the weekly updates thereto as published in the Register, or consult the regional DHUD office. If the community is eligible for participation and if the project *containg insurable structures, each of $10,000 or more in value*, the applicant is to furnish evidence that it is participating in the program and a letter of intent that it will obtain the required insurance both during construction and for the useful life of the project.

Structures that must be insured are new or reconstructed surface structures which are walled and roofed (control building or pumping station for example). Items which are not eligible for insurance are sewers or other facilities not likely to be damaged in the event of flooding.

Projects outside the flood hazard areas or in areas not yet delineated by DHUD need not obtain Flood insurance. Communities have until one year after notification of identification as a flood-prone area to meet the flood insurance requirement.

Re: 40 CFR 30.405-10
Program Requirements Memorandum, PRM 78-8, 8/18/78

b. Sewer Use Ordinance - The applicant must submit a current sewer use ordinance or a letter of intent that such ordinance will be enacted before completion of the project. The sewer use ordinance must prohibit new sources of inflow (illegal connections from sump pumps, foundation drains, roof leaders, etc.) from being connected to the sewer system and require proper design and construction techniques for new connections. It must also require pretreatment of toxic or incompatible industrial wastes prior to discharge into the system.

Re: 40 CFR 35.927-4, .925-15

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5. Operation and Maintenance Scheduling

The applicant must provide evidence that he will comply with the requirements for the efficient operation and maintenance of the proposed facilities. This involves the submission of an O&M manual, development of emergency procedures, use of properly trained staff, and provision of adequate budget, operational reports and adequate laboratory testing. Grant payments will be limited until these items are submitted by the applicant for review and approval by EPA.

At the time of the Step 3 application, a schedule which shows the time of submission of the required documents to EPA is satisfactory evidence that the applicant will comply with the O&M requirements. The schedule may also show when the operating personnel will be hired. Many states have adopted specific programs for O&M and the reviewer should be familiar with the requirements of the particular state.

Re: 40 CFR 35.920-3(a), .925-10, .935-12

6. Sewer System Rehabilitation Scheduling

Where the scope of the Step 3 grant includes sewer system rehabilitation, the applicant must submit a schedule for completing the rehabilitation program. Because the applicant is required to comply with the schedule for sewer system rehabilitation in order to receive full grant payment, the schedule must be reasonable for the work involved. It is desireable that the rehabilitation program be completed prior to completion of the plant. However, the rehabilitation program may continue beyond the scheduled start-up provided that the unfinished rehabilitation work will not have an adverse effect on the operation of the plant.

Re: 40 CFR 35.927-5(c), .935-16, .927-3

7. Institutional Arrangements

The applicant must have proper jurisdictional control over all political entities within the service area to insure the adoption of user charges, cost recovery systems, and sewer use ordinances and to insure full implementation of the sewer system rehabilitation program (where applicable). The control will normally be in the form of signed service agreements between the applicant and each contributing municipality specifying the obligations of all parties for compliance with the applicable statutory and regulatory requirements.

Re: 40 CFR 35.917-6

6. Operation and maintenance manual - the O&M manual is the primary document required in the operation and maintenance program, and should incorporate items a-d above into a comprehensive package of instructions and information. Specifically, the manual should include:

   - design information describing the components and equipment of the treatment plant, including simplified schematic diagrams of the facilities, pipelines and control systems and detailed diagrams of more complicated areas;

   - process information discussing the control of various processes to achieve maximum efficiency, including a clear explanation of process functions of the various components in simplified language with references to appropriate equipment manuals for detailed technical information;

   - maintenance requirements, including schedules for routine adjustment and lubrication of equipment, referencing appropriate manufacturer's manuals for details;

   - laboratory procedures, specifying various analyses and monitoring schedules required for process control and by the NPDES permit and other regulations, describing laboratory equipment and general maintenance, and referencing appropriate literature for standard test procedures;

   - safety aspects of the various process units and related equipment and procedures for complying with the OSHA requirements;

- administrative procedures describing the various records required and reports to be submitted as a function of the State monitoring program;

- troubleshooting procedures and a description of the emergency response plan, including procedures for notification of proper authorities, emergency equipment repair, and references to the appropriate equipment manuals for specifications and limitations of components.

Ref: 40 CFR 35.935-10, .935-12
Federal Guidelines, Operation and Maintenance of Wastewater Treatment Facilities, August 1974
Considerations for Preparation of Operation and Maintenance Manuals, (GPO No. EP 2.8: OP 2)
Emergency Planning for Municipal Wastewater Treatment Facilities (GPO No. EP 2.8: W 28/6)
Estimating Laboratory Needs for Municipal Wastewater Treatment Facilities (GPO No. EP 2.8: W 28/3)
Start-up of Municipal Wastewater Treatment Facilities (GPO No. EP 2.8: W 28/5)
Maintenance Management Systems for Municipal Wastewater Facilities (GPO No. EP 2.8: W 28/4)
Estimating Staffing for Municipal Wastewater Treatment Facilities (GPO No. EP 2.8: W 28/3)
A Planned Maintenance Management System for Municipal Wastewater Treatment Plants (GPO No. EP 1.23/2: 600/2-73-004).
Program Requirements Memorandum, PRM 77-8, 11/28/76

3. Design and construction costs allocable to Federal facilities producing less than 250,000 gpd or 5 percent of the total design flow of waste treatment works, whichever is less.

That portion of the construction costs allocable to the Federal facility shall be based on all factors which significantly influence the cost of the treatment works. Factors such as strength, volume, and delivery flow rate characteristics will be considered and included to insure a proportional allocation of costs to the Federal facility.

As a minimum, the portion of construction cost allocable to the Federal facility should be based on the ratio of its flow to the total design flow of the treatment works. The portion (percentage) allocable to the Federal facility must be agreed upon by the municipality and Federal agency, and approved by EPA prior to award of a Step 2 or Step 3 grant, whichever is applicable, for the works or any portion thereof. See *PRM 76-88* (PG-62) - 12/20/75 for additional details.

- Site Acquisition vs. Site Preparation Costs:

All costs associated either directly or indirectly with the acquisition of any land used for or incidental to the construction of treatment plants, lagoons, force mains, gravity sewers, outfall lines, appurtenant piping and structures, and pumping stations whether by purchase, rental, lease or easement (except as noted above) are ineligible. Similarly, all legal, realty, engineering, and grantee costs associated with such ineligible acquisition are unallowable as are the costs of easements, rights-of-way, nonconstruction related surveying, plat preparation, meetings, etc. NOTE: The cost of land *(including, in some cases, leasing or easements - PRM 77-6, 12/30/76)* used as an integral part of the treatment process, such as spray irrigation sites - see *PRM 76-88 (PG-62) - 7/18/76, or land for the ultimate disposal of residues from waste water treatment - see PRM 76-89 (PG-67), 4/8/76*, may be eligible if approved and in accordance with pertinent regulations, guidelines and PRMs. Legal, administrative and engineering costs associated with the acquisition of grant eligible land are allowable for grant participation.

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Costs associated with the preparation of the treatment works site (including appurtenant features) before, during, and to the extent agreed upon in the grant agreement or amendment thereto, after construction are generally eligible. These costs include such items as: grade and construction staking surveys, surveying for alignment and slope, preparation of working drawings and plans dealing with site preparation, locations, grades, slopes, distances, depths, alignments, etc. Also eligible are costs such as finegrading, seeding, and protective trees and shrubs.

Costs related to reasonable site screening or aesthetic purposes are also allowable. Criteria for participating in aesthetics related work include: Support expressed in NEPA related studies, approved facility plans, necessary screening of adjacent properties, whether the facility is in constant public view or remote therefrom, etc.

- Certificate as to Title to Project Site:

Legal costs associated with certifying as to the adequacy of the grantee's interest in the project site should be considered a normal function of government incident to the project and as such are unallowable. (Except in the case of grant eligible land (see above).

- Acquisition of Privately or Publicly Constructed Waste Treatment Facilities:

Costs incurred by a grantee or applicant associated with the purchase, lease or acquisition of privately or publicly constructed and owned waste treatment facilities are not allowable.

- Demolition of Existing Structures:

Demolition of existing structures constitutes an allowable cost provided that the structures are on the facility site (including rights-of-way for the eligible sewer lines) and that construction cannot be undertaken

- Labor Charges and Related Costs: 4/

Regardless of contract terms, where charges have been made to the grant and there was no cost incurred, the charges should be questioned. Labor charges and related costs for straight time or overtime hours which are billed but for which cost has not been incurred will be unallowable for Federal participation. (Compensatory time will be considered in determining actual labor costs incurred. However, compensatory time is allowable only if it is incurred in accordance with established company policy, if it is properly controlled and accounted for, and if it is used within an annual accounting period.)

4/ (These requirements have been EPA National policy under both PL 84-660 and PL 92-500 as required under 40 CFR 30.800 and .805).

- *Start-up Services:*

Grant eligible start-up services will average 20 man-days for most treatment plants. For large or complex plants, however, grant eligible start-up services may range up to 300 man-days. Start-up services shall be completed within a period of twelve months. To be grant eligible, the services must be rendered by the design engineer or others identified by the design engineer.

Start-up services include:

1. *Pre and post start-up personnel training--i.e., onsite training given plant operation and maintenance personnel on the operation and control of the specific treatment processes of the facility.*

2. *Fine tuning to optimize process control.*

3. *Laboratory procedures--i.e., onsite testing and instruction to assure that the sampling and laboratory testing program needed for satisfactory process control and regulatory monitoring and reporting are fully understood.*

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4. Maintenance management system--i.e., start-up services to assure effective implementation of the maintenance management system outlined in the facility's O&M manual.

5. Records management systems--i.e., services to provide the training needed to implement a records management system as outlined in the O&M manual.

6. Revise O&M manual--i.e., revising the O&M manual based upon actual operating experience obtained during the start-up period.

Note that costs normally associated with the operation and maintenance of a municipal wastewater treatment facility, such as salaries for operation and maintenance personnel, chemicals (except for the basic inventory required for start-up), power, etc., are not eligible. Also ineligible are the costs of all off-site formal training/orientation programs. Finally, wet and dry equipment and facility testing is the responsibility of the contractor under the supervision of the Engineer.

(See FRM 77-8, 11/30/76)

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Memoranda		Former Designation
PRM 75-36	Value Engineering in the EPA Construction Grants Program	PG-63
PRM 75-37	User Charge System: Plan and Schedule	PG-65
PRM 75-38	Relationship Between 201 Facility Planning and Water Quality Management (WQM) Planning	PG-66
PRM 75-39	Eligibility of Land Acquisition Costs for the Ultimate Disposal of Residues from Wastewater Treatment Processes	PG-67
PRM 75-40	Priority List Supplement to FY 1977 Construction Grants Guidance	PG-68
PRM 76-1	Construction Grants Program Issuances	
PRM 76-2	Cancellation of Certain Program Guidance Memoranda (PGM)	
PRM 76-3	Presentation of Local Government Costs of Wastewater Treatment Works in Facility Plans	
PRM 76-4	Coordination of Construction Grants Program with EPA-Corps of Engineers Section 404/Section 10 Permit Programs	
PRM 76-5	Flood Insurance Requirements	
PRM 77-1	Treatment Works for Recreational Parks, Industrial Parks, and Institutions	
PRM 77-2	Grant Eligibility of Start-up Services	
PRM 77-3	Plan of Operation for Municipal Wastewater Treatment Facilities	
PRM 77-4	Cost Allocations for Multiple Purpose Projects	
PRM 77-5	Grant Eligibility of Land Acquisition by Leasehold or Easements for Use in Land Treatment and Ultimate Disposal of Residues	

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